Vivitar®

Vivicam 3930

User Manual

English

040331TP

FCC STATEMENT

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

Note:

This equipment has been tested and found to comply with the limits for Class B digital devices, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

Use of shielded cable is required to comply with Class B limits in Subpart B of Part 15 of the FCC rules.

Do not make any changes or modifications to the equipment unless otherwise specified in the manual. If such changes or modifications should be made, you could be required to stop operation of the equipment.

TRADEMARK INFORMATION

- Microsoft® and Windows® are U.S. registered trademarks of Microsoft Corporation.
- Pentium® is a registered trademark of Intel Corporation.
- Macintosh is a trademark of Apple Computer, Inc.
- SD™ is a trademark.
- Other names and products may be trademarks or registered trademarks of their respective owners.

READ THIS FIRST

Notice:

1. Product design and specifications are subject to change without notice. This includes primary product specifications, software, software drivers, and user's manual. This User Manual is a general reference guide for the product.
2. The product and accessories that come with your camera may be different from those described in this manual. This is due to the fact that different retailers often specify slightly different product inclusions and accessories to suit their market requirements, customer demographics, and geographical preferences. Products very often vary between retailers especially with accessories such as batteries, chargers, AC adapters, memory cards, cables, carrying cases/pouches, and language support. Occasionally a retailer will specify a unique product color, appearance, and internal memory capacity. Contact your dealer for precise product definition and included accessories.
3. The manufacturer assumes no liability for any errors or discrepancies in this user manual.
4. For drivers, revisions to this manual, and manuals in other languages please updates, refer to our website.

WARNINGS

- Do not use the camera if it is emitting smoke, unusual odor or noise, becoming unusually hot to be touched, or if it is in any other abnormal state. Operating the camera in any of these circumstances may cause a fire or an electrical shock. Stop using the camera immediately, turn the camera off, and then disconnect the power source. After checking that smoke is no longer being emitted, contact to your dealer or a local authorized service facility for repairs. Never attempt to repair this camera by yourself, as this is dangerous.

- Do not use the camera if any foreign objects have entered the camera. Turn the camera off and then disconnect the power source. Later on contact to your dealer or a local authorized service facility. Do not continue to use the camera as this may cause a fire or an electrical shock.

- Do not place the camera in any unstable locations such as on a wobbly table or slopping surface where the camera may fall or tip over and cause damage.

- If the camera has been dropped or if the camera case has been damaged, turn the camera off and then disconnect the power source . Then contact to your dealer or a local authorized service facility. Do not continue to use the camera as this may cause a fire or an electrical shock.

- Do not expose the camera to the moisture and avoid water gets into the camera. Take particular care when using the camera under extreme weather conditions such as rain or snow, or when operating the camera at the beach or near water. Water in the camera may cause a fire or an electrical shock.

- Do not attempt to modify the camera. This may cause a fire or an electrical shock.

- Do not remove the camera casing. This may cause an electrical shock. Internal inspection, maintenance and repairs should only be carried out by your dealer or a local authorized service facility.

CAUTIONS

- Do not place the camera in damp or dusty locations. This may cause a fire or an electrical shock.
- Do not place the camera in a location affected by oil fumes or steam, such as near a cooking stove or humidifier. This may cause a fire or an electrical shock.
- Do not cover or wrap the camera with a cloth or quilt. This may cause heat to build up, distort the case and cause a fire. Always use the camera and its accessories in well-ventilated locations.
- Handle the camera carefully and do not bump the camera into any hard object. Handling the camera roughly may cause a malfunction.
- When leaving the camera unused for long periods, such as during a vacation, always unplug the camera from the power source for safety. Failure to do so could result in a fire.
- Do not use battery other than those specified for use with the camera. The use of unsuitable battery may result in the battery splitting or leaking and causing a fire, injury, or soiling of the battery compartment.
- When fitting battery into the camera, check the polarity markings on the battery (- and +) to ensure that you insert the battery correctly. Incorrect battery polarity may result in the battery splitting or leaking and causing a fire, injury, or soiling of the battery compartment.
- Remove the battery if the camera will not be used for an extended period of time. The battery may leak and cause a fire, injury or soiling of the battery compartment. If the batteries leak, clean and wipe the battery compartment carefully and install new battery. Wash your hands carefully if you touch the battery fluid.
- **WARNING**: Handling the USB and AV cables on this product may expose you to lead, a chemical known to the State of California to cause birth defects or other reproductive harm. ***Wash hands after handling.***

CONTENTS

INTRODUCTION----------9
- **Overview**----------9
- **Package Contents**----------10
- **Optional Accessories**----------10

GETTING TO KNOW THE CAMERA----------11
- **Front View**----------11
- **Rear View**----------12
- **Mode Dial**----------13
- **Viewfinder LED Indicator**----------14
- **LCD Monitor Information** ----------15

GETTING STARTED----------17
- **Installing the Battery**----------17
- **Using an AC Power Adapter**----------18
- **Charging the Battery**----------19
- **Inserting an SD Memory Card**----------20
- **Attaching the Strap**----------21

CAPTURING IMAGE----------22
- **Photography in the Auto Capture Mode [A]**----------22
  - Using the Viewfinder----------22
  - Using the LCD Monitor----------23
  - LCD Monitor Display (Capture Mode)----------23

Optical Zoom----------24
Digital Zoom----------25
Self-timer----------26
Flash----------27
Focus Modes----------29
Exposure Compensation----------30
Setting the Image Resolution and Quality----------32
Program Mode [P]----------34
Shutter Speed-priority Mode [Tv]----------34
Aperture-priority Mode [Av]----------35
Full Manual Mode [M]----------36
Portrait Mode [ ]----------36
Sports Mode [ ]----------37
Night Scene Mode [ ]----------37
Making Movies [ ]----------38

CHANGING THE PRESET CONDITIONS (IN CAPTURE MODE)--------39
Picture Settings----------40
Size (Resolution)----------40
Quality----------40
Sharpness----------41
Contrast----------41
Color----------41
Function Settings----------42
Capture Mode----------42
Voice Memo----------42
LCD Brightness----------43
Digital Zoom----------43

Preview----43
Interval /Count----44
Auto Exposure/AutoWhite Balance Settings----44
White Balance----44
Metering----45
ISO----46
Manual White Balance----46

IMAGE PLAYINGBACK [▶]----47
Playing Back Images (Single-Frame Playback)----47
Voice Recording----48
Movie PlayBack ----49
Thumbnail Display----51
Playback Zoom----52
Slideshow Display----53
Protecting Images----54
LCD Brightness----55
LCD Monitor Display (Playback Mode)----55

ERASING IMAGES [🗑]----56
Erasing Single Image----56
Erasing All Images----56
Erasing Selected Image----57

SET-UP MODE----58
Basic Setting----58
Card Information----58
Frame Number Reset----59
Format----59
Sound----60
Beep----60
Auto Power Off----61
Custom Setting----62
Date/Time----62
System Reset----62
Language----63
Video Output----63
System Information----64

TRANSFERRING RECORDED IMAGES/MOVIES TO YOUR COMPUTER----65
Step 1: Installing the USB Driver----66
Step 2: Connecting the Camera to Your Computer----66
Step 3: Downloading Images/Movies----67

INSTALLING PHOTOSUITE----68
INSTALLING PHOTOVISTA----69
CONNECTING THE CAMERA TO OTHER DEVICES----70
CAMERA SPECIFICATIONS----71

INTRODUCTION

Overview

Your new digital camera delivers high quality, 2560 x 1920 resolution images using a 5.25 Megapixel CCD imager. Using either the optical viewfinder or the 1.5" TFT color image LCD monitor, you can compose images and then examine them in detail. An auto-flash sensor automatically detects the shooting (lighting) conditions and determines whether the flash should be used. This feature helps ensure that your images turn out right.

The ViviCam 3930 uses Secure Digital (SD) Memory Cards for saving images and movies. Even if the camera's power is turned OFF, the images saved on the SD Memory Card are not erased. Your SD Memory Cards can be used repeatedly. Images you have taken can be downloaded to your computer using the USB cable (USB driver required for Win 98 and Mac OS 8.6). You can enhance and retouch your images on your computer by using the provided editing software, or image editing software that you may already own. You may share your images with your friends via e-mail, in a report, or on a website.

Package Contents

Carefully unpack your camera and ensure that you have the following items. In the event that any item is missing or contact your dealer.

- Digital camera
- A/V cable
- User's manual
- USB cable
- Software CD-ROM
- Camera strap
- Camera pouch

Common Optional Accessories

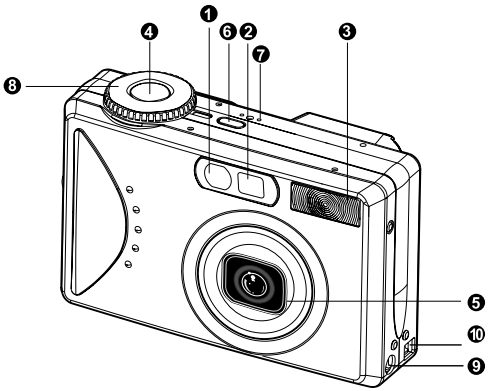
- SD Memory Card
- AC power adapter
- Battery (rechargeable)
- Battery recharger

Note:

- Included accessories and components will vary, as specified by different retailers. Check with your retailer for specifics.

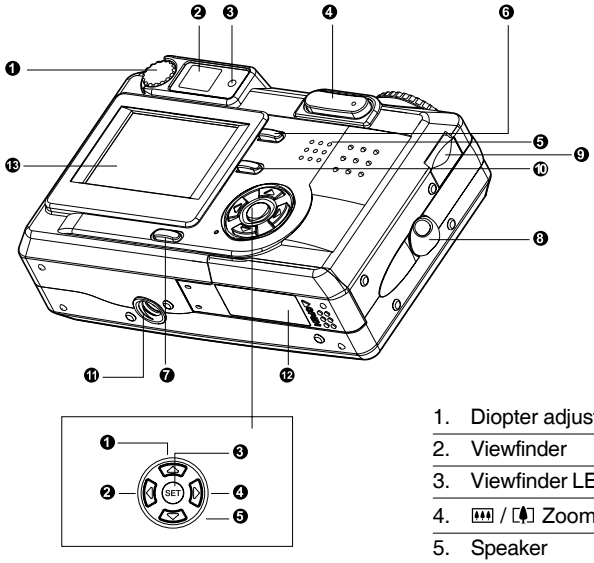
GETTING TO KNOW THE CAMERA

Front View



1. Self-timer/Autofocus LED
2. Optical viewfinder
3. Built-in flash
4. Shutter button
5. Lens/lens cover
6. **POWER** button
7. Microphone (**MIC)**
8. Mode dial
9. DC IN 5V terminal
10. USB and A/V OUT terminal

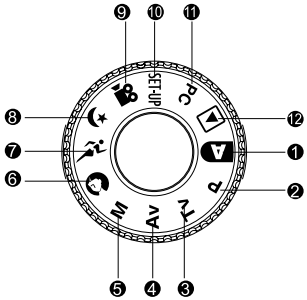
Rear View



1.	▲	Arrow button (up)
	Focus button/macro	
2.	◀	Arrow button (left)
	Exp./back light	
3.	**SET**	Set button
4.	▶	Arrow button (right)
	Flash button	
5.	▼	Arrow button (down)
	Self-timer button/interval	

1. Diopter adjustment dial
2. Viewfinder
3. Viewfinder LED
4. / Zoom button
5. Speaker
6. **MENU** Menu button
7. Display button
8. Strap attachment
9. Command dial
10. Delete button
11. Tripod socket
12. Battery/ SD Memory Card cover
13. LCD monitor

Mode Dial



1. **A** Auto mode
2. **P** Program mode
3. **Tv** Tv (Shutter Speed priority)
4. **Av** Av (Aperture priority)
5. **M** Manual mode
6. Portrait mode
7. Sports mode
8. Night scene mode
9. Movie mode
10. SET-UP Set-up mode
11. **PC** PC mode
12. Playback mode

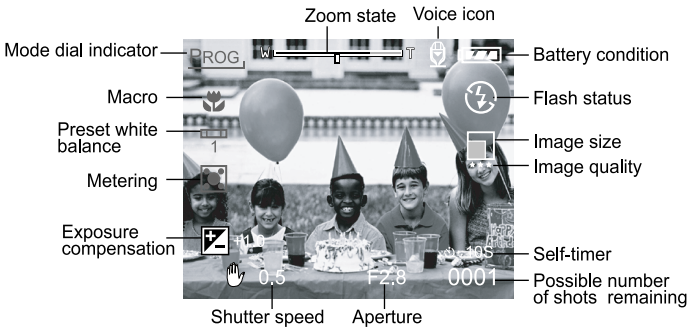
Viewfinder LED Indicator

Color	State	Current Camera Mode			
		Photography Modes	Setup Mode	PC Mode	Battery Charge Mode
Green	On	AE or AF is locked with the Shutter button held half -way down.	In standby mode.	In communication to PC. (SD Memory Card is inserted.)	Battery is charging
Red	On	Writting to SD Memory Card in progress.	Accessing SD Memory	Connecting to PC. (SD Memory Card is inserted.)	Error
	Flashing	When the image is not in focus	---	---	Interval timer - standby
Orange	On	Processing images, flash charging	---	Disconnection (SD Memory Card is inserted.)	No battery
	Flashing	Hardware malfunction		SD Memory Card is not inserted.	---

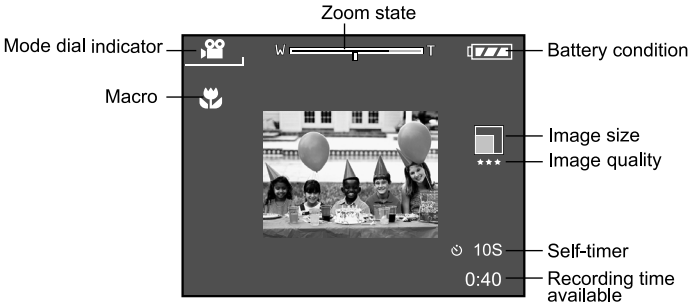
LCD Monitor Information

AUTO capture mode

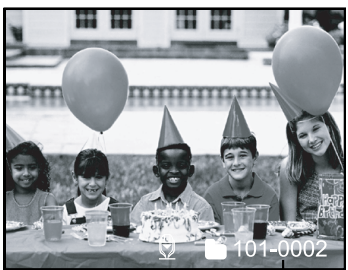
Program/Tv/Av/Manual/Portrait/Sports/Night scene mode



Movie mode



Playback mode (Standard)



Playback mode (Detailed information)

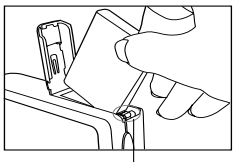
File Name	:PICT0029.JPG
Size	:640X480
Quality	:Fine
Shutter speed	:1/80
Aperture	:3.5
ISO	:100
Strobe	:ON
File Size	:72kBytes

GETTING STARTED

You can use either a Lithium Ion battery or an AC power adapter (5 V) to power your camera. Battery power is convenient for capturing images or video clips, while an AC adapter power is useful when transferring images to your computer.

Installing the Battery

1. Make sure the camera power is off.
2. Open the battery/SD Memory Card cover.
3. Insert the battery in the correct orientation as shown.
   - The minus (-) terminal should be towards the hand strap, and the positive (+) terminal towards the LCD display
   - Tilt the battery lock lever toward the strap attachment and then insert the battery following the orientation of the arrow on the battery's label.
   - Insert the battery as far as it can go.
4. Close the battery/SD Memory Card cover.
   - To remove the battery:
     Open the battery/SD Memory Card cover and then release the battery lock lever. After the battery is slightly ejected, pull out the battery slowly.

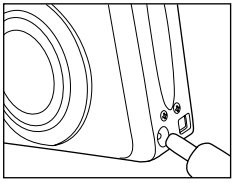

Battery lock lever

Note:

- It is possible to insert the battery backwards. Even though the battery appears to fit properly the camera will not power-up if the battery is backwards. If your camera will not power up after inserting a new battery, please try reversing the battery.
- Use only the specified battery type (Lithium Ion).
- If you are not going to use the battery for an extended period of time, remove it from the camera to prevent leakage or corrosion.
- Never use different type of battery.
- Avoid using cold batteries as low temperature will shorten the battery life and reduce the camera performance.
- Duracell CP-1 non-rechargeable Lithium batteries may be used. However, **do not** attempt to use the AC adapter with a CP-1 battery, as the CP-1 is NOT rechargeable.

Using an AC Power Adapter (Optional)

1. Make sure the camera power is off.
2. Connect one end of the AC power adapter to the DC IN 5V terminal.
3. Connect the other end of the AC power adapter to a power outlet.



Note:

- Make sure to use only the AC power adapter specified for this camera. Damage caused by the use of an incorrect adapter is not covered under the warranty.
- Use your AC power adapter while transferring images to your computer to conserve battery life and prevent unexpected automatic power-off of the camera.

Charging the Battery

1. Make sure the camera power is off.
2. Slide the battery/SD Memory Card cover into the direction of the [OPEN] arrow.
3. Insert the battery, noting correct polarity (+ and -).
4. Slide the battery lock lever to adjust the battery.
5. Close the battery/SD Memory Card cover.
6. Connect one end of the AC power adapter to the DC IN 5V terminal.
7. Connect the other end of the AC power adapter to a power outlet.
8. Note the LED indicator
   Green: Charging has started
   Indicator off: Charging has completed
   Orange: Stand by
   Red: Replace the battery

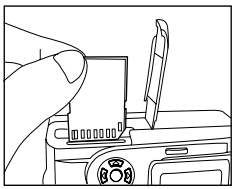
Note:

- Make sure to use only the AC power adapter specified for the camera. Damage caused by the use of an incorrect adapter is not covered under the warranty.
- If charging does not initiate turn the came on, and then off
- Never attempt to charge any battery other than the battery originally included with the camera.
- Never attempt to charge a CP-1 type battery.
- Do not charge the camera battery in a high temperature environment. Charge only at room temperature.

Inserting an SD Memory Card

All images and video clips taken by the camera are stored on an SD (Secure Digital) Memory Card. If the camera's power is turned OFF, your images saved on the SD Memory Card will not be lost. An SD Memory Card can be used repeatedly.
You may use an SD card up to 512MB so that you can store additional images and video clips.

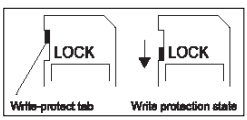
1. Make sure the camera is off.
2. Slide the battery/SD Memory Card cover in the direction of the [OPEN] arrow.
3. Insert an SD Memory Card :
   - The front side of the memory card (printed arrow) should face towards the front side of the camera.
   - If the card cannot be inserted, check the orientation.



4. Close the battery/SD Memory Card cover.
   - To remove the SD Memory Card, make sure the camera is off. Open the battery/SD Memory Card card cover. Press lightly on the edge of the memory card and it will eject.

Note:

- If the camera is powered-on without a card, the "NO CARD" message appears on the LCD monitor.
- To prevent valuable data from being accidentally erased from an SD Memory Card you can slide the write-protected tab (on the side of the SD Memory Card) to "LOCK".

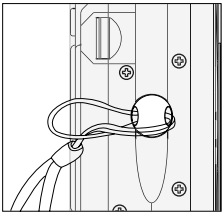


- To save, edit or erase data on an SD Memory Card, you must unlock the card.
- MMC type memory cards cannot be used.
- It is suggested that you format an SD Memory Card in the camera before use.

Attaching the Strap

To prevent accidental dropping of your camera, always use the hand strap. Attach the hand strap as follows:

1. Thread the small loop of the hand strap through the strap eyelet on the camera.
2. Pull the large loop through the small loop until the strap is firmly secured.



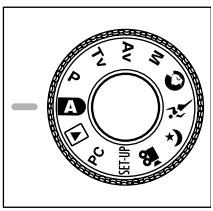
CAPTURING IMAGES

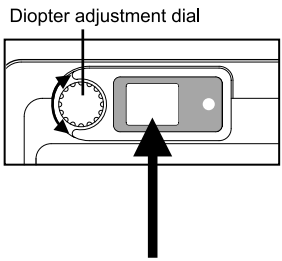
Photography in the Auto Capture Mode [A]

Your camera provides for single-image capture, continuous image capture, and automatic exposure bracketing. It is equipped with both an optical viewfinder and a 1.5" full color TFT LCD monitor to compose images. Capturing images using the optical viewfinder without the image LCD will conserve battery power. If your battery is low, it is recommended to compose images by using the optical viewfinder. The LCD monitor can help you accurately compose the pictures and examine all details. However, this will consume more battery power. Always use the LCD display for macro shots.

Using the Viewfinder

1. Turn the camera on by pressing the **POWER** button.
2. Set the mode dial to [A].
3. Compose your shot in the viewfinder.
   - Turn the "diopter adjustment dial" until the image appears clearly within the viewfinder.
4. Press the shutter button down halfway to set exposure and focus, then press down fully to capture the image.
   - The viewfinder LED indicator lights red while the camera is processing and saving an image.

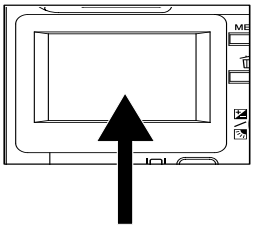




Note:

- You may record a voice memo just after still-image capture. You may record up to 10 seconds. To terminate recording, press the shutter button down fully.

LCD Monitor



1. Turn the camera on by pressing the **POWER** button.
2. Set the mode dial to [A].
   - By default, the LCD monitor setting is "ON".
3. Compose the picture in the LCD monitor.
4. Press the shutter button down halfway to set exposure and focus, then press down fully to capture the image.
   - The viewfinder LED indicator lights red while the camera is processing a captured image.

Note:

- In still image capture mode, the Auto Focus LED is activated in Auto and Macro modes when the LV (lighting value) value is less than 6.

LCD Monitor Display (Capture Mode)

The [|▭|] Display button turns the display and display icons on or off. Whether in "Still Image" or "Movie"mode, preview image with full OSD is displayed.

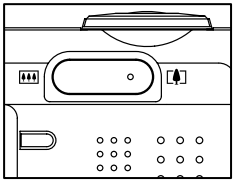
OSD (on-screen-display) with full iconic display → Icons OFF → LCD monitor OFF

Note:

- The image in the LCD monitor darkens in strong sunlight or bright light. This is not a malfunction.
- Using the LCD monitor for an extended period of time will decrease the number of images you can take. To increase the shots and conserve battery power, it is recommended to turn the LCD monitor off and use the viewfinder instead.

Optical Zoom

When using optical zoom the lens physically moves (zooms). Zoom photography allows you to take telephoto and wide-angle shots. The subject appears closer by pressing the [ ] button and appears farther away by pressing the [ ] button.



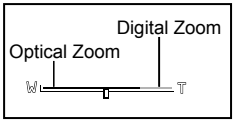
1. Set the mode dial to one of [ ], [**P**], [**Tv**], [**Av**], [**M**], [ ], [ ], [ ], [ ] and power on the camera.
2. If required,turn on the LCD monitor by pressing the [ ] button.
3. Compose the picture by using the [ ] / [ ] button.
   - Pressing the [ ] button zooms in on the subject, and enlarges the subject on the LCD monitor.
   - Pressing the [ ] button provides a wider angle view. The lens position moves according to the zoom button setting.
4. Press the shutter button down halfway to set exposure and focus, then press down fully to capture the image.

Digital Zoom

Using digital zoom, images can be enlarged even beyond the extent of the optical zoom so that the subject appears even closer. However, the more the image is enlarged, the grainer the image will become. The digital zoom function is only available when the LCD monitor is ON and digital zoom is enabled in the setup process.

To capture a digitally zoomed image, perform the following steps:

1. Set the mode dial to one of [A], [**P**], [**Tv**], [**Av**], [**M**], [ ], [ ] , [ ] and power on the camera.



2. If required, turn on the LCD monitor by pressing the [ ] button.
3. To enable the digital zoom is as follows:
   a. Press the **MENU** button.
   b. Press the ◄ or ►buttons to select **Function** page.
   c. Press the ▲ or ▼buttons to select **Digital Zoom**, and press the **SET** button.
   d. Press the ▲ or ▼ buttons again to select **ON**, and press the **SET** button.
   e. Press the **MENU** button.
   f . To activate the digital zoom, press the [ ] button completely until the lens reaches the limit of its travel and continue to press until the image on the LCD monitor begins to enlarge (zoom.)
4. Press the shutter button to capture a “zoomed” image.

Note:

- The camera has 3X optical zoom and 4X digital zoom.
- The digital zoom function is terminated when the LCD is turned off.

Self-timer

Using the [⏲/INT.] self-timer you can select the self-timer delay. You may also use the self-timer for interval shooting.
Self-timer settings:

[2 sec.]	The camera automatically takes an image after two seconds.
[10 sec.]	The camera automatically takes an image after ten seconds.
[10+2 sec.]	The camera automatically takes one image after ten seconds, and then another again after two more seconds

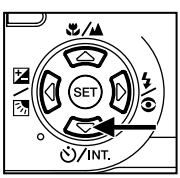
Note:

- If the flash capacitor must be charged up, the second shot may be delayed beyond two seconds.

Interval settings:

[Interval]	The camera automatically takes an image at preset time interval until memory is full or the battery is depleted.

Activate the self-timer by pressing the shutter button. After selecting this mode, the self-timer icon displays on **LCD** monitor and then LED on the front panel blinks rapidly for the final three seconds. Using the self-timer allows you to get into the scene when taking group images.



1. Secure the camera on a tripod or place it on a stable surface.
2. Set the mode dial to one of [A], [**P**], [**Tv**], [**Av**], [**M**], [ ], [ ], [ ], [ ] and power on the camera .
3. Press the [⏲/INT.] button.
   - Toggle the self-timer button in the following order:

   Off → 10 sec → 2sec → 10+2sec → Interval
4. Compose your image.
5. Press the shutter button down halfway to set exposure and focus, then press down fully to capture the image.
   - The self-timer function is activated. The image is taken after the preset time.

- When the images are taken using the LCD monitor, the count down is displayed.
- In interval mode, the camera will appear to turn itself off between shots. The camera is actually in a power-saving sleep mode between shots.

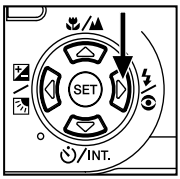
Note:

- After an image is taken using self-timer, the self-timer mode is turned off.
- The self-timer is not available in the continuous capture mode.
- The self-timer is only available for 2 or 10 seconds delay in the movie [🎥] mode. The camera automatically starts recording after 2 or 10 seconds.

Flash

The four-mode flash is designed to function automatically when lighting conditions warrant the use of flash. You can take an image using a flash mode to suitable your circumstances. If you change the flash mode, the camera will retain that setting when the camera is turned off.

1. Set the mode dial to one of [A], [**P**], [**Tv**], [**Av**], [**M**] and power on the camera.



2. Press the [⚡] button repeatedly until the desired flash mode appears.
   - When you toggle the flash button in auto [A] mode, the available flash modes are displayed in the following order.

[No display] Automatic → [👁⚡] Red-Eye Fill Flash → [⚡] Fill Flash → [⚡] Flash OFF → [No display]

3. Compose your image and press the shutter button down halfway to set exposure and focus, then press down fully to capture the image.

Note:

- After the flash fires, it takes approximately five to ten seconds to recharge the flash capacitor in preparation for the next shot, as indicated by the orange LED.

The camera has FOUR flash modes: Automatic, Red-Eye Reduction, Forced (fill) Flash, and Off.
The table below will help you to choose the appropriate flash mode:

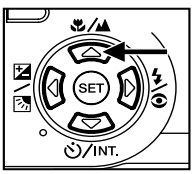
Icon	Flash Mode	Description
[ ]	Automatic	The flash fires automatically according to the ambient lighting conditions. Select this mode for general photography.
[ ]	Red-Eye Reduction (With auto-flash except to [**Tv**] [**Av**],[**M**])	Select this mode for general photograph The flash emits a precursor-flash before the main flash fires. This causes the pupil in the human eyes to contract, reducing the red-eye phenomenon. Select this mode when taking images of people and animals in low-light conditions.
[ ]	Forced (fill) Flash	The flash will always fire regardless of the surrounding brightness. Select this mode for recording images with high contrast (back lighting) and deep shadows.
[ ]	Flash Off	The flash will not fire. Select this mode when taking images where flash photography is prohibited, or when the distance to the subject is beyond the effective range of the flash.

Note:

- Auto flash can only be set in auto [A] mode. It cannot be set in [M], [P], [Tv] and [Av] modes.
- In the [ ] Portrait mode, flash is set to Red-Eye Reduction mode automatically.
- In the [ ] Sports mode, flash is set to OFF [ ].
- In the [ ] Night scene mode, flash is set to ON [ ] except when using the infinity [ ] Focus mode.

Focus Modes

1. Set the mode dial to one of [A], [**P**], [**Tv**], [**Av**], [**M**], [ ], [ ], [ ] , [ ] and power on the camera.
2. Toggle the [/▲] Focus button.
   The selected focus mode is displayed on the LCD monitor.
   [no indication]:Normal Auto Focus (30 inches to infinity).
   [ ]: Macro Auto Focus (4 inches to infinity/ Wide, 12 inches to infinity/Tele).
   [▲]: The camera will focus at infinity.
   [3m]: The camera will focus at approximately nine feet.
   [1m]: The camera will focus at approximately three feet.



3. Compose the picture.
4. Press the shutter down halfway to set exposure and focus, then press down fully to capture the image.

Note:

- When shooting a close-up in Macro mode, use the LCD monitor to compose your shot, to avoid the off-center parallax phenomenon.
- There is not a distinct point (subject range) at which Normal mode is favored over Macro mode; take an image in both modes and compare the results.
- After a Macro shot is taken **DO NOT FORGET** to reset the lens to the normal position.
- The selected focus mode will be retained after the camera is powered off and then on again.

Exposure Compensation

This setting [⊠/⊡] allows you to intentionally lighten or darken the entire image. Use this setting when the optimum brightness (exposure) cannot be obtained, for example, when the brightness between the subject and the background is not balanced or when the subject occupies only an extremely small part of the screen.

Using the [⊠/⊡] Exposure Compensation button select “Normal”, “Backlight compensation”, or “Exposure compensation” modes.

1. Set the mode dial to one of [P], [Tv], [Av] and power on the camera.
2. Toggle the [⊠/⊡] button to select exposure compensation mode or backlight compensation mode.
3. When exposure compensation mode is selected, rotate the **Command** dial to adjust the exposure, and press the [⊠/⊡] button again to confirm your choice.
   - Rotate the **Command** dial to counter clockwise direction to decrease (darken) exposure, and rotate the **Command** dial to clockwise direction to increase (brighten) exposure.
4. Compose the picture, press the shutter button down halfway to set exposure and focus, then press down fully to capture the image.

Backlight compensation

Exopsure compensation

Guidelines for Using Exposure Compensation

■ Positive (+) Compensation
- Shooting of printed text (black characters on white paper)
- Backlit portraits
- Very bright scenes (such as snowfields) and highly reflective subjects
- Shots made up predominantly of sky

■ Negative (-) Compensation
- Spot lit subjects, particularly against dark backgrounds
- Copying of printed text (white characters on black paper)
- Scenes with low reflectivity, such as shots of green or dark foliage

Note:

- ■ While selecting "Backlight compensation", the EV value is set to +1.3 EV automatically.
- ■ In "Exposure compensation" the default value is 0.0EV
- ■ The EV compensation range is as follows:
  -2.0 / -1.7 / -1.3 / -1.0 /- 0.7 / -0.3 / 0 (default) / +0.3 / +0.7/ +1.0 / +1.3 / +1.7 / +2.0
- ■ Exposure Compensation cannot be set in auto [A] mode.

Setting the Image Resolution and Quality

Image resolution and quality settings determine the pixel size (resolution dimension), image file size, and compression ratio for your images. These settings affect the number of images that can be stored on an SD Memory Card. Larger resolution and higher quality images offer the best photographic results but take up more memory space. Larger resolution/high quality settings are recommended for printed output and situations requiring the finest detail. Smaller resolution/lower quality images take up less memory space and may be quite suitable for sharing images via e-mail, in a report, or on a web page.

To change image size or image quality,

1. Set the mode dial to one of [A], [**P**], [**Tv**], [**Av**], [**M**], [ ], [ ] , [ ] and power on the camera.
2. Press the **MENU** button.
   ■ The menu screen appears.
3. Select Size or Quality by using the ▲ or ▼ buttons.
4. Press the **SET** button. Select the desired image size or image quality setting by using the ▲ or ▼ buttons.
5. Press the **SET** button to confirm. To exit the menu screen press the **MENU** button.

The following tables show the approximate number of images or movies that can be stored in a given memory capacity.

Still Images

Quality mode (Compression Rate)	Image Size	8MB	16MB	32MB	64MB	128MB	256MB	512MB
Fine (1/4)	5M(2560 x 1920)	2	6	13	27	55	105	222
	3M(2048 x 1536)	4	10	22	46	93	177	374
	1.2M(1280 x 960)	9	20	42	86	174	331	698
	VGA(640 x 480)	31	69	145	298	602	1147	2417
Standard (1/8)	5M(2560 x 1920)	4	10	22	46	93	177	374
	3M(2048 x 1536)	8	17	36	74	150	286	604
	1.2M(1280 x 960)	15	34	72	149	301	572	1208
	VGA(640 x 480)	48	100	210	430	870	1657	3491
Economy (1/16)	5M(2560 x 1920)	9	20	42	86	174	331	698
	3M(2048 x 1536)	15	34	72	149	301	573	1208
	1.2M(1280 x 960)	28	60	126	258	522	994	2094
	VGA(640 x 480)	91	181	379	775	1566	2984	6284

Movies

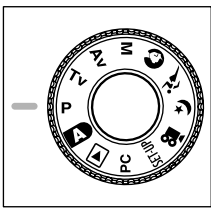
Quality mode (Compression Rate)	Movie Size	Time (seconds, maximum in 8 MB.)
Fine (1/10)	FULL (320 x 240)	30
	HALF (160 x 120)	90
Standard (1/14)	FULL (320 x 240)	45
	HALF (160 x 120)	120
Economy (1/19)	FULL (320 x 240)	60
	HALF (160 x 120)	180

* The above data shows the standard test results. The actual capacity varies according to the shooting conditions and settings.

Program Mode [P]

In Program Mode the camera automatically adjusts the shutter speed and the aperture value according to the brightness of the subject. It is possible to change the white balance, metering, and exposure compensation in program mode.

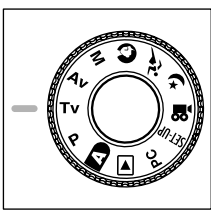
1. Set the mode dial to [P] and power on the camera.
2. Compose your image.
3. Press the shutter button down halfway to set exposure and focus, then press down fully to capture the image.



Shutter Speed-priority Mode [Tv]

In this mode, images are taken with the priority given to shutter speed. The camera automatically sets the aperture value according to the shutter speed.
A fast shutter speed produces an image that looks as if a moving subject is still.
A slow shutter speed produces as photograph that makes you feel that it is flowing.

1. Set the mode dial to [Tv] and power on the camera.
2. Rotate the **Command** dial to adjust the shutter speed.
3. Compose the picture and press the shutter button down halfway to set exposure and focus, then press down fully to capture the image. The camera will select an aperture value automatically.

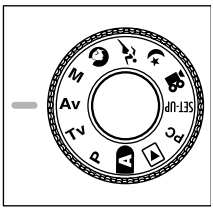


Note:

- If an appropriate combination cannot be achieved (if the aperture is adjusted to its limits), the aperture value is displayed in “red”.

Aperture-priority Mode [Av]

In this mode, images are captured with the priority given to aperture. The camera automatically sets the shutter speed according to the aperture. A small aperture value produces a portrait photo with an out-of-focus background, as the depth of field decreases. The smaller the aperture value, the more out-of-focus the background becomes. A large aperture value (small physical aperture) produces sharp images on both close and distant objects like landscapes. The larger the aperture value, the greater the depth of focus.



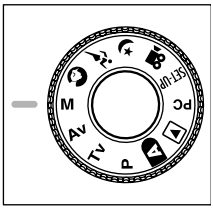
1. Set the mode dial to [Av] and power on the camera.
2. Rotate the **Command** dial to adjust the aperture value.
   - The aperture value and the shutter speed corresponding to that value are displayed on the LCD monitor.
3. Compose the picture and press the shutter button down halfway to set exposure and focus, then press down fully to capture the image.

Note:

- The larger the F value, the smaller the aperture size becomes and vice versa.

Full Manual Mode [M]

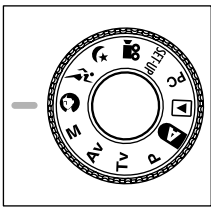
In the full-manual mode you can specify both the aperture and shutter speed values separately before taking an image. Both the aperture value and shutter speed can be changed by rotating the **Command** dial.



1. Set the mode dial to [M] and power on the camera.
2. Adjust the aperture and shutter speed separately.
   - Press the [⊠/⊠] button to select the aperture or shutter speed. Note that the adjusted value is displayed in blue on the LCD monitor.
   - Rotate the **Command** dial to adjust the value.
3. Compose your images, press the shutter button down halfway to set exposure and focus, then press down fully to capture the image.

Portrait Mode [ ]

Select the Portrait mode to make people stand out, with the background out-of-focus. In Portrait mode the flash is set red-eye reduction mode automatically.

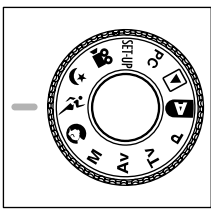


1. Set the mode dial to [ ] and power on the camera.
2. Compose the picture.
3. Press the shutter button down halfway to set exposure and focus, then press down fully to capture the image.

Sports Mode [ ]

Select Sports mode to take images of fast-moving subjects. Flash photography is not possible in Sports mode as the flash capacitor cannot charge quickly enough.

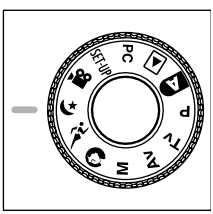
1. Set the mode dial to [ ] and power on the camera.
2. Compose your image.
3. Press the shutter button down halfway to set exposure and focus, then press down fully to capture the image.



Night Scene Mode [ ]

Select Night Scene mode to take images of people against a dusk or nighttime background. The flash is set to Slow Synchro and the flash is fired using a slower shutter speed.

1. Set the mode dial to [ ] and power on the camera.
2. Compose your image.
3. Press the shutter button down halfway to set exposure and focus, then press down fully to capture the image.



Making Movies

The movie mode allows you to record video clips at a resolution of either of 320 x 240 or 160 x 120 pixels. By dialing the MODE switch to the movie [ ] position, the camera can capture short movies along with voice recording. The camera shows the preview image on the LCD monitor.

(In movie [ ] mode, the LCD monitor cannot be turned off.)

1. Set the mode dial to movie [ ].
2. Compose your scene, press the shutter button down halfway to set exposure and focus, then press down fully to capture the image.
   - Recording begins. [REC] appears on the LCD monitor.
3. To stop, press the shutter button again.
   - Recording will automatically stop when there is no more free space on the SD Memory Card, or when the maximum size that a single movie can be recorded is reached.

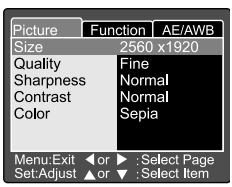
Note:

- In movie [ ] mode, EV compensation cannot be set.
- In movie [ ] mode, the flash mode is automatically set to [OFF].
- A movie recorded at 320x240 is displayed on the entire LCD monitor, while a movie recorded at 160x120 is displayed in the center of the screen.

CHANGING THE PRESET CONDITIONS (IN CAPTURE MODE)

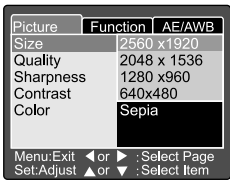
This menu is for changing the basic settings in the [A], [**P**], [**Tv**], [**Av**], [**M**], [ ], [ ], [ ] or [ ] modes.

1. Set the mode dial to one of [A], [**P**], [**Tv**], [**Av**], [**M**], [ ], [ ], [ ], or [ ] and power on the camera.
2. Press the **MENU** button.
   - The menu screen is displayed.
3. Use the ◄ or ► buttons to select the menu page.
4. Use the ▲ or ▼ buttons to select the desired item and press the **SET** button.
   - The options are displayed.
5. Use the ▲ or ▼ buttons to select the desired setting and press the **SET** button.
   - This saves the settings, and returns the display to menu screen.
6. To exit the menu screen, press the **MENU** button.
   - The camera is now ready to take images.



Picture Settings

The Picture Setting memu contains five items: Size, Quality, Sharpness, Contrast, and Color.



Size

Select the desired image size (resolution).

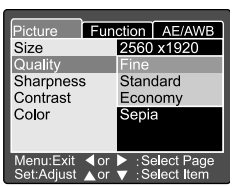
[2560 x 1920]: 2560 x 1920 pixels
[2048 x 1536]: 2048 x 1536 pixels
[1280 x 960]: 1280 x 960 pixels
[640 x 480]: 640 x 480 pixels

Note:

- In the movie [🎥] mode, image size is either 320 x 240 or 160 x 120 pixels.

Quality

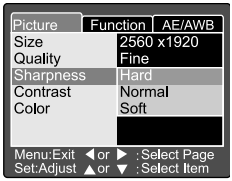
Set the quality (compression ratio) at which images are to be recorded.



[Fine]: 1/4 compression (still image), 1/10 compression (video clip)
[Standard]: 1/8 compression (still image), 1/14 compression (video clip)
[Economy]: 1/16 compression (still image), 1/19 compression (video clip)

Sharpness

Set the level of the image sharpness.
[Hard]: Hard effect
[Normal] : Normal sharpness (default)
[Soft]: Soft effect

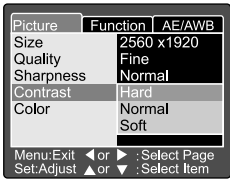


Note:

- This function is not available in the movie [🎥] mode.

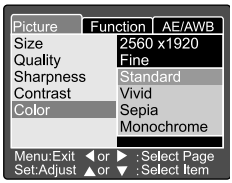
Contrast

Set the contrast of your images.
[Hard]: Hard contrast
[Normal]: Automatic (standard) setting (default)
[Soft]: Soft contrast



Color

Set the color of your images.
[Standard]: Standard color (default)
[Vivid]: Vivid color
[Sepia]: Sepia
[Monochrome] : Black and white (gray scale)



Function Settings

The Function Setting contains six items: Capture Mode, Voice Memo, LCD Brightness, Digital Zoom, Preview, and Interval/Count.

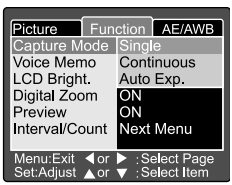
Capture Mode

Set the capture mode.

[Single]: One-shot mode (default).

[Continuous]: In this mode, up to three images are taken continuously at an interval of approximately 0.5 seconds.

[Auto Exp.]: In this mode, the camera takes three consecutive images in the order of standard exposure, underexposure, and overexposure compensation. This is known as bracketing.

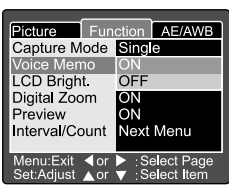


Voice Memo

You may add a voice memo to a still image. If voice memo is activated you may record up to ten seconds of audio using the camera's microphone.

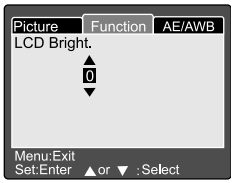
[ON]: Enable voice memo

[OFF]: Disable voice memo



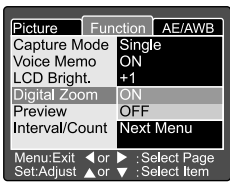
LCD Brightness

Adjust the brightness of the LCD monitor by selecting LCD Bright. Press the SET button, and the LCD control is displayed. Press ▼ button to darken the LCD monitor, or ▲ button to lighten the LCD monitor. The LCD monitor's adjustment range is -5 to +5. The default value is 0.



Digital Zoom

In addition to optical zoom you may also zoom-in on your subjects digitally up to a factor of 4X.
[ON]: Enable digital zoom (default).
[OFF]: Disable digital zoom.

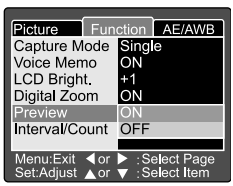


Preview

Set to display an image on the LCD monitor immediately after you have taken the shot.
[ON]: Enable display preview (default).
[OFF]: Disable display preview.

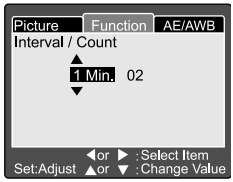
Note:

- An image is displayed on the LCD monitor for 2 seconds.
- When preview is set to "OFF", voice memo setting is also fixed to "OFF".



Interval/Count

This setting allows you to specify the time interval and the maximum number of shots that can be taken using the self-timer/interval feature.



Selecting Interval/Count and press the SET button:

Press the ▲ or ▼ buttons to change the interval time.

[1 Min.]: Recording interval is 1 minute
[3 Min.]: Recording interval is 3 minutes
[10 Min.]: Recording interval is 10 minutes.
[60 Min.]: Recording interval is 60 minutes.

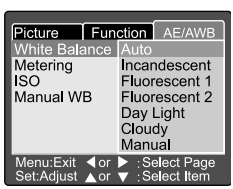
Select count by pressing the ◄or ► buttons. You can set the maximum number of image you want to take using the ▲ or ▼ buttons. To cancel Interval/Count press the power button, or rotate the mode dial to another position.
[2]: 2 shots can be taken
≀
[99]: 99 shots can be taken

Auto Exposure/Automatic White Balance Settings

The AE/AWB menu contains four items: White balance, Metering, ISO, and Manual WB. This menu is not available in the auto [A] and movie [🎥] modes.

White Balance

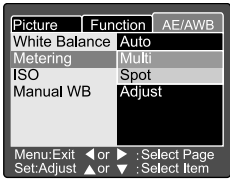
The camera determines the white balance by averaging the light that enters the lens. You may specify a white balance condition when taking images under specific lighting conditions.



[Auto] : Automatic white balance (default).
[Incandescent]: Incandescent light mode.
[Fluorescent 1]: Reddish fluorescent light mode.
[Fluorescent 2]: Bluish fluorescent light mode.
[Day Light]: Daylight mode.
[Cloudy]: Cloudy mode.
[Manual]: Manual mode.

Metering

The camera calculates the exposure level before an image is taken. There are two ways that exposure may be determined (metered.)

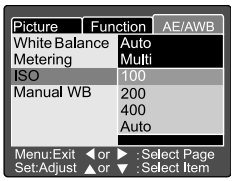


[Multi]: Multi metering (default)
The exposure is measured and calculated for entire scene area. By dividing the entire area of the scene, the exposure level for each unit is calculated. A well balance exposure can be obtained.

[Spot]: Spot metering
The exposure is measured in a very small area at the center of the scene. Exposure is determined on the subject on interest without being affected by the surrounding environment.

ISO

You may set the photographic sensitivity of your camera.



[100]: Equivalent to color ISO100.

[200]: High-sensitive photography equivalent to color ISO200.

[400]: High-sensitive photography equivalent to color ISO400.

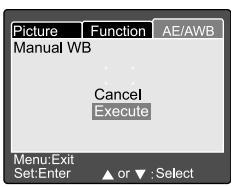
[Auto]: Automatically set between ISO 100 to ISO 400.

Note:

- In [ ], [ ], [ ], [ ] or [ ] modes, the ISO will be automatically set between ISO 100 to ISO 400.
- In [**Tv**], [**Av**] or [**M**] modes your preference will be applied.
- In [**P**] mode, ISO can be 100, 200, 400, or Auto . If Auto is selected, the camera will automatically set the ISO value according to the ambient brightness.

Manual White Balance

You may select “Manual WB” by using ▲ or ▼ buttons from the AE/AWB menu, and pressing the **SET** button. The LCD monitor shows the manual WB menu. Compose your scene with a white object (e.g. white paper) within the area indicated by blue indicator in the LCD display.



Select “Execute” by using the ▲or ▼ buttons, then press the **SET** button.

IMAGE PLAYBACK [▶]

Playing Back Your Images (Single-Frame Playback)

Playing back still images one image at a time:

1. Set the mode dial to playback [▶] and power on the camera.
   - The last recorded image appears on the LCD monitor.
2. Rotate the **COMMAND** dial or press the ▲ or ▼ buttons to advance to the next frame or to go back one frame.
   - Rotate clockwise: Display the next image.
   - Rotate counterclockwise: Display the previous image.

Note:

- Press the **SET** button to playback voice memos.
- Images can be rotated by pressing the ◄ or ► buttons during playback. Pressing the ◄ button rotates an image counterclockwise, and pressing the ► button rotates it clockwise.
- If there are no images on the SD Memory Card, the message “NO IMAGE” is displayed on the LCD monitor.
- You can also playback your images on a TV screen. First connect one end of the A/V cable to the A/V out terminal of the camera. Then connect the other end to the A/V input socket of your TV. Set the mode dial to (playback) and then turn the TV and camera on.
- Make sure to turn off the camera before connecting or disconnecting with the A/V cable.

Voice Recording

You may record sound to be associated with an image at the time of playback. By pressing the shutter button while playing back an image, voice may be recorded. When pressing the shutter button down fully “VOICE RECORDING” is indicated on the LCD monitor for 10 seconds. Pressing the shutter button down fully again “VOICE RECORD END” is indicated.

Note:

- In the playback mode, a voice icon indicates a voice recording.
- Voice recording is also possible at the time of still-image capture.
- Voice recording can only be done once per image. You cannot re-record or append a voice segment.

Movie Play Back

You may playback movies that you have recorded. The movies made at FULL resolution (320 x 240) are displayed on the entire LCD display, while those made at HALF resolution (160 x 120) are displayed in the center of the LCD screen.

1. Set the mode dial to playback [▶] and power on the camera.
   - The last recorded image appears on the LCD monitor.
2. Rotate the **Command** dial or press the ▲ or ▼ buttons to select the movie to play back.
3. Press the **SET** button.
   - Playback of the selected movie begins.

You can control movie playback as follows:

	During playback	During pause 2x	During playback 4x	During playback playback 2x	During reverse playback 4x	During reverse	While stopped
▶ button	2x-speed playback	1-frame feed	4x-speed playback	Playback	2x-speed playback	2x-speed playback	-
◀ button	Reverse 2x-speed playback	Reverse 1-frame feed	Reverse 2x-speed playback	Reverse 2x-speed playback	Reverse 4x-speed playback	Playback	-
▲ button	pause	Canceling pause	Pause	Pause	Pause	Pause	Display backwards picture (or Movie thumbnail)
▼ button	-	-	-	-	-	-	Display forward picture (or Movie thumbnail)
SET button	Stop(The display returns to the 1st frame playback)	Stop(The display returns to the 1st frame playback)	Stop(The display returns to the 1st frame playback)	Stop(The display returns to the 1st frame playback)	Stop(The display returns to the 1st frame playback)	Stop(The display returns to the 1st frame playback)	Playback
R Command dial	-	1-frame feed	-	-	-	-	Display forward picture (or Movie thumbnail)
L Command dial	-	Reverse 1-frame feed	-	-	-	-	Display backwards picture (or Movie thumbnail)

Thumbnail Display

This function allows you to view up to nine thumbnail images on the LCD monitor simultaneously so that you can quickly scan for a particular image.

1. Set the mode dial to [▶] and power on the camera.
   - The last image frame appears on the LCD monitor.
2. Press the [⊞] button.
   - Nine images are displayed simultaneously.
3. Use the ▲,▼, ◄or ► buttons to move the cursor and select the image to be displayed at regular size.
4. Press the **SET** button to display the selected image on the full screen.

Note:

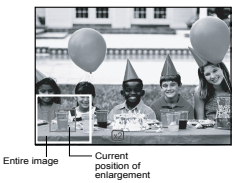
- In the thumbnail display mode, movie icon [🎥] is displayed for movies.

Zoom Playback

The camera has the ability to zoom (enlarge) images during playback at 2X or 4X. When reviewing an image, you may enlarge a selected portion of an image. This magnification allows you to view fine details.

Movies cannot be displayed using the zoom playback feature.

1. Set the mode dial to playback [▶] and power on the camera.
   - The last image frame appears on the LCD monitor.
2. Rotate the **COMMAND** dial or press the ▲ or ▼ buttons to select the frame you want to enlarge.
   - You can also select the image by the same operation as for thumbnail playback.



3. Adjust the zoom ratio by using the [🔍] or [▦] buttons.
   - Pressing the [🔍] button will enlarge the image.
   - To return to normal magnification, press the [▦] button
   - When an image is displayed enlarged, both white frame and green frame are displayed on the LCD monitor.
   - The white frame represents the entire image, while the green frame shows the location of the currently enlarged area within the context of the full image.
4. Use the ▲,▼, ◄or ► buttons to select the area of enlargement.
   - Adjust the display area to enlarge while viewing the white and green frames.
5. To return to the regular display, press the [▦] button.

Note:

- Pressing the [🔍] button magnifies the image from 1x→2x→4x.
- Pressing the [▦] button reduces the image from 4x→2x→1x.

Slideshow Display

The slideshow function enables you to playback your images in sequential order as a slide show. This is a very useful and entertaining feature for reviewing recorded images and for presentation.

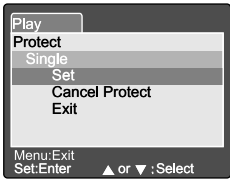
1. Set the mode dial to [▶] and power on the camera.
   - The last image frame appears on the **LCD** monitor.
2. Press the **MENU** button.
   - The menu screen appears.
3. Select Slide Show by using the ▲ or ▼ buttons.
4. Press the **SET** button.
   - The slideshow starts at 3 seconds interval and [ ] is displayed in the lower left-hand corner of the **LCD** monitor.
   - To stop a slideshow, press (and hold momentarily) the **SET** button.

Note :

- The Auto Power Off function is disabled during a slide show.

Protect

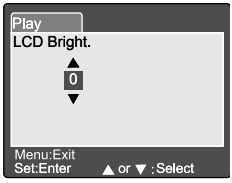
The protect function allows you to protect an image or movie file from erasure. Follow the steps below to protect an image or movie:



1. Set the mode dial to playback [▶] and power on the camera.
2. Press the **MENU** button.
   ■ The menu screen appears.
3. Select the Protect by using the ▲ or ▼ buttons and press the **SET** button.
4. The Protect submenu appears, including Single, All, and Select. Use the ▲ or ▼ buttons to select one of them and press the **SET** button to confirm.
5. Use the ▲ or ▼ buttons to select the desired setting and press the **SET** button.
   ■ In Single/All submenu, select the desired setting and press the **SET** button.
   [Set]: The image displayed on the LCD monitor is locked and [🔒] is displayed on the LCD monitor.
   [Cancel Protect]: Cancel image protection.
   [Exit]: Exit from this menu screen.
   ■ If “Select” is selected, thumbnail display appears on the LCD monitor. Use the ▲, ▼, ◀ or ▶ buttons to select the image to be protected and press the display [DISP] button to select lock/unlock and press the **SET** button to confirm.

LCD Brightness

You may adjust the brightness of the LCD monitor. This adjustment does not affect the brightness or exposure of the image to be recorded. The adjustment range is -5 to +5.



1. Set the mode dial to playback [▶] and power on the camera.
2. Press the **MENU** button.
   - The menu screen appears.
3. Select the "LCD Bright." by using the ▲ or ▼ buttons and press the **SET** button.
4. Use the ▲ or ▼ buttons to select the desired setting and press the **SET** button.

LCD Monitor Display (Playback Mode)

The [DISP] Display button allows you to change the display content on the LCD monitor during playback. You may display detailed image information, if desired.

1. Set the mode dial to [▶] and power on the camera.
2. Rotate the **Command** dial or press ▲ or ▼ button to select the image.
3. Press the [DISP] button.
   - Each press of the [DISP] button switches the display content as follows:

     Standard → Image only → Detailed information

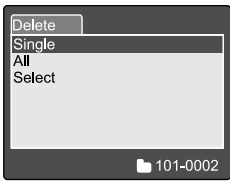
Note:

- This function is not available for movie playback.

ERASING IMAGES[🗑]

The erase [🗑] button provides for image file erasure. Pressing the erase [🗑] button in capture mode, the last image appears on the LCD display as candidate for erasure.

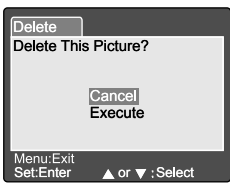
1. Set the mode dial to playback [▶] and power on the camera.
2. Press the erase [🗑] button.
   - The Delete menu is displayed on the LCD display.
3. Use the ▲ or ▼ buttons to select the Delete sub-menu (Single/All/Select).



Erasing a Single Image or Movie

Single: Erase this image, only.

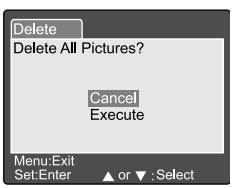
a. Select **[Single]** and press the **SET** button to confirm the selection.
   - "Delete This Picture?" sub-menu is displayed on the LCD.
b. Use the ▲ or ▼ buttons to select Execute/ Cancel.
   [Execute]: Erase this image.
   [Cancel]: Cancel the deletion
C. Press the **SET** button to confirm the setting.



Erasing All Images

All: Erase all (unprotected) images and movies from memory.

a. Select **[All]** and press the **SET** button to confirm the selection.
   - "Delete All Pictures?" sub-menu is displayed on the LCD monitor.
b. Use the ▲ or ▼ buttons to select Execute/Cancel.
   [Execute]: Erase all images and movies.
   [Cancel]: Cancel the deletion.
c. Press the **SET** button to confirm the setting.



Erasing a Selected Image

Select: Erase a selected image.

a. Select **[Select]** and press the **SET** button to confirm the selection.
   - Thumbnail display and [🗑] appear on the LCD monitor.

b. Use the ▲,▼, ◄or ► buttons to select the image you want to erase and press the [🗑] button to confirm the selection.
   - [🗑] icon appears on the selected image.

c. Press the **SET** button to confirm deletion.

Note:

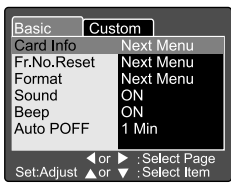
- Images cannot be erased when they are protected or the SD Memory Card is write-protected.
- This function is available for all modes except for PC and SET-UP modes

SET-UP MODE

This set-up feature allows you specify and adjust settings for using your camera in addition to image-related settings. You may select personal preferences for your camera using Set-up mode.

Basic Setting

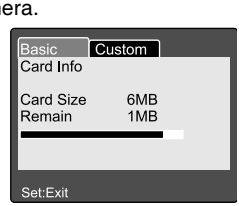
The Basic Setting contains six items:
Card Information, Frame Number Reset, Format, Sound, Beep, and Auto Power Off.



Card Information

Displays the total and remaining memory size of your SD Memory Card.

1. Set the mode dial to [**SET-UP**] and power on the camera.
2. Use the ▲ or ▼ buttons to select Card Info.
3. Press the **SET** button.
   - Card Information will be displayed.
4. Press **SET** button once again to exit.



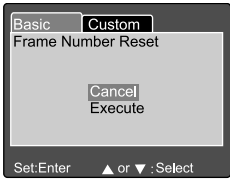
Note:

- Most memory cards will be reported as having slightly less capacity (less memory) than the capacity printed on the memory card due to differences in the way capacities are calculated. (Binary versus engineering calculations.)

Frame Number Reset

Reset the frame number.
Default reset: Folder number is 100 and file number is 0001.

1. Set the mode dial to [**SET-UP**] and power on the camera.
2. Use the ▲ or ▼ buttons to select Fr. No. Reset.
3. Press the **SET** button.
   - Frame Number Reset menu is displayed on the LCD monitor.
4. Use the ▲ or ▼ buttons to select Execute/Cancel.
   [Execute]: Reset the frame number.
   [Cancel]: Does not reset the frame number.
5. Press the **SET** button to confirm the setting.



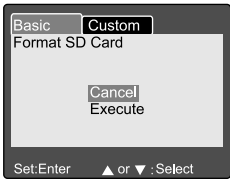
Note:

- If a folder already exists on your SD Memory Card, the camera will assign a different (higher) number than the existing folder.

Format

Formatting erases all images, movies, sound, as well as any non-camera related data as it reformats the SD Memory Card loaded in your camera. Protected images are also erased. An SD Memory Card cannot be formatted if it is write-protected.

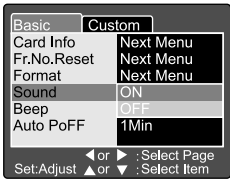
1. Set the mode dial to **[SET-UP]** and power on the camera.
2. Use the ▲ or ▼ buttons to select Format.
3. Press the **SET** button.
   - "Format SD card" menu is displayed on the LCD monitor.
4. Use the ▲ or ▼ buttons to select Execute/Cancel.
   [Execute]: Format the memory card.
   [Cancel]: Does not format the memory card.
5. Press the **SET** button to confirm the setting.



Sound

Turns the camera speaker ON/OFF.

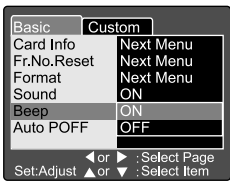
1. Set the mode dial to **[SET-UP]** and power on the camera.
2. Use the ▲ or ▼ buttons to select Sound.
3. Press the **SET** button.
   - The pull down menu for Sound is displayed on the LCD.
4. Use the ▲ or ▼ buttons to select the desired sound setting.
   [**ON**]: Enable the camera speaker.
   [**OFF**]:Disable the camera speaker.
5. Press the **SET** button to confirm the setting.



Beep

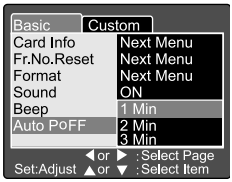
Turns camera function-beeps ON/OFF.

1. Set the mode dial to [**SET-UP**] and power on the camera,
2. Use the ▲ or ▼ buttons to select Beep.
3. Press the **SET** button.
   - The pull down menu for Beep is displayed on the LCD.
4. Use the ▲ or ▼ buttons to select ON/OFF.
   [**ON**] : Enable camera function-beeps.
   [**OFF**] : Disable camera function-beeps.
5. Press the **SET** button to confirming the setting.



Auto Power Off

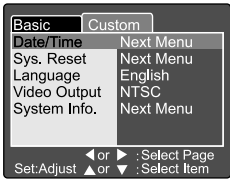
If no camera button is pressed for a defined period of time while the camera is on, the camera turns off automatically to conserve power. The default value is 1 minute. You may select other time periods.



1. Set the mode dial to [**SET-UP**] and power on the camera.
2. Use the ▲ or ▼ buttons to select Auto PoFF.
3. Press the **SET** button.
   - The pull down menu for Auto Power Off is displayed on the LCD monitor.
4. Use the ▲ or ▼ buttons to select the desired time setting.
   [1 Min]: If no camera operation after 1 minute, Auto power off is activated (default).
   [2 Min]: If no camera operation after 2 minutes, Auto power off is activated.
   [3 Min]: If no camera operation after 3 minutes, Auto power off is activated.
5. Press the **SET** button to confirm the setting.

Custom Settings

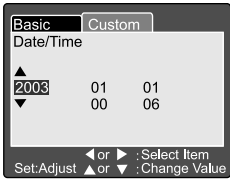
The Custom Setting contains five items: Date/Time, System Reset, Language, Video Output, and System Information.



Date/Time

Set the Date and Time.

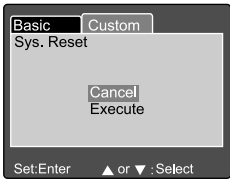
1. Set the mode dial to [**SET-UP**] and power on the camera.
2. Use the ▲ or ▼ buttons to select Date/Time.
3. Press the **SET** button.
   - The Date/Time menu is displayed on the LCD monitor.
4. Use the ◄or ► buttons to select the item to set.
5. Use the ▲ or ▼ buttons to set the value for each item.
6. Press the **SET** button to confirm the setting after all item values are set.



System Reset

System Reset allows you to reset all camera settings to the factory default settings.

1. Set the mode dial to [**SET-UP**] and power on the camera.
2. Use the ▲ or ▼ buttons to select System Reset.
3. Press the **SET** button.
   - The System Reset menu is displayed on the LCD monitor.
4. Use the ▲ or ▼ buttons to select Execute/Cancel.
   [Execute]: Return to default setting.
   [Cancel]: Retain the current setting.
5. Press the **SET** button to confirm the setting.

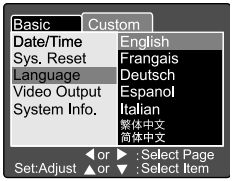


Note:

- Date/Time cannot be reset.

Language

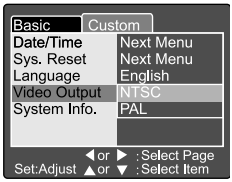
You may choose one of several languages for the on-screen display operating language.



1. Set the mode dial to [**SET-UP**] and power on the camera.
2. Use the ▲ or ▼ buttons to select the desired Language.
3. Press the **SET** button.
   - The pull down menu for Language is displayed on the LCD monitor.
4. Use the ▲ or ▼ buttons to select the desired OSD language.
5. Press the **SET** button to confirm the setting.

Video Output

In order to play back images and movies on a TV you must select the video output standard according to the country in which your camera is used.

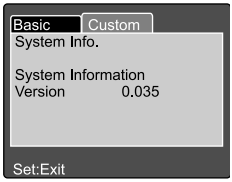


1. Set the mode dial to **[SET-UP]** and power on the camera.
2. Use the ▲ or ▼ buttons to select Video Output.
3. Press the **SET** button.
   - The pull down menu for Video Output is displayed on the LCD monitor.
4. Use the ▲ or ▼ buttons to select the appropriate standard.
   [NTSC] : NTSC standard.
   [PAL] : PAL standard.
5. Press the **SET** button to confirm the setting.

System Information

Displays the camera firmware version information.

1. Set the mode dial to [**SET-UP**] and power on the camera.
2. Use the ▲ or ▼ buttons to select System Info.
3. Press the **SET** button.
   - The camera firmware version is displayed on the LCD monitor.
4. To return to main menu, press the **SET** button.



TRANSFERRING RECORDED IMAGES/ MOVIES TO YOUR COMPUTER

You can share recorded images movies with your family or friends via e-mail or post them on the Web. Before doing those things, you need to connect the camera to your computer by using the USB cable and then transfer the images/movies.

To transfer images/movies from the camera to your computer, follow these steps:
Step 1: Installing the USB driver (Windows 98 and Mac OS 8.6 users only)
Step 2: Connecting the camera to your computer
Step 3: Downloading images/movies

	System Requirements (Windows)	System Requirements (Macintosh)
CPU	Pentium 266 MHz processor or higher	PowerPC G3/G4
OS	Windows 98/98SE/Me/2000/XP	OS 8.6 or higher
Memory	64MB	128MB
Free Space on Hard Disk	128 MB hard disk space	128 MB hard disk space
Required	CD-ROM Drive, available USB Port	CD-ROM Drive, available USB Port

Step 1: Installing the USB Driver

Windows 98 computers

The USB driver on the CD-ROM is exclusively for Windows 98 computers. Installing the USB driver on computers running Windows 2000/ME/XP is not necessary.

1. Insert the CD-ROM that came with the camera into your CD-ROM drive. The welcome screen appears.
2. Click “INSTALL USB DRIVER”. Follow the on-screen instructions to complete the installation. After the USB driver has been installed, restart your computer.

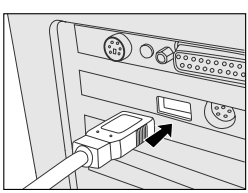
Macintosh OS 8.6 computers

Mac OS 8.6 users must install a USB driver. For Mac OS 9.0 or higher, the computer will automatically recognize the camera and load its own USB drivers.

1. Insert the CD-ROM that came with the camera into the CD-ROM drive.
2. Select and double-click “Digital Camera Driver Installer ”.
3. Select “Install Location” and click “Install”.
4. Follow the on-screen instructions to complete the installation and restart your computer.

Step 2: Connecting the Camera to Your Computer

1. Connect one end of the USB cable to an available USB port on your computer.
2. Connect the other end of the USB cable to the USB connector on the camera.
3. Turn the camera on.
4. From the Windows desktop double click on “My Computer”



5. Look for a new “removable disk” icon. This “removable disk” is actually the memory (or memory card) in your camera. Typically, the camera will be assigned drive letter “e” or higher.
6. Double click on the removable disk and locate the DCIM folder.
7. Double click on the DCIM folder to open it to find more folders
   - Your recorded images and video clips will be inside these folders
   - Copy & Paste or Drag-N-Drop image and video files to a folder on your computer

Mac users: double-click the “unlabeled” disk drive icon on our desktop. iPhoto may automatically launch. The volume label may vary depending upon whether you use internal camera memory, or a memory card.

Step 3: Downloading Image and Video Files

When the camera is turned on and connected to your computer, it is considered to be a disk drive, just like a floppy disk or CD. You can download (transfer) images by copying them from the “removable disk” (“untitled” disk on a Macintosh) to your computer hard drive.

Windows -
Open the “removable disk” and subsequent folders by double clicking on them. Double click on the folder. Your images are inside these folder(s). Select the images that you want, then choose “Copy” from the “Edit” menu. Open the destination location (folder) and choose “Paste” from the “Edit” menu. You may also drag and drop image files from the camera to a desired location.

Macintosh and Desktop/LX -
Open the “unlabeled” disk icon, and the destination location on your hard disk. Drag and drop from the camera to the desired destination.

Note:
- It is recommended that you use an AC power adapter for the camera while transferring images and video clips from the camera to your computer since camera power may be cut off unexpectedly if the batteries run out.
- Memory card users may prefer to use a memory card reader (highly recommended).

INSTALLING PHOTOSUITE

INSTALLING PHOTOSUITE

PhotoSuite is a very user-friendly image-editing program. With PhotoSuite, you can retouch, compose and organize your images. It contains a variety of templates, such as photo frames, birthday cards, calendars and more. Get your images ready and go explore this amazing program.

To install PhotoSuite:

1. Insert the CD-ROM packaged with the camera into the CD- ROM drive. The welcome screen appears.
2. Click “Install PhotoSuite”. Follow the on- screen instructions to complete the installation.

Note:

- For information on how to use PhotoSuite to edit and retouch your recorded images, please refer to its online help.
- For Windows 2000/XP users, make sure to install and use the PhotoSuite while logged in as a user with an Administrator account.
- PhotoSuite is not supported on the Mac. iPhoto or iPhoto2 is recommended.

INSTALLING PHOTOVISTA

PhotoVista is a very powerful program that allows you to make panoramic images. With PhotoVista you can create full 360 degree panoramic images by stitching together images taken with your camera. Get your images ready and go explore this amazing program.

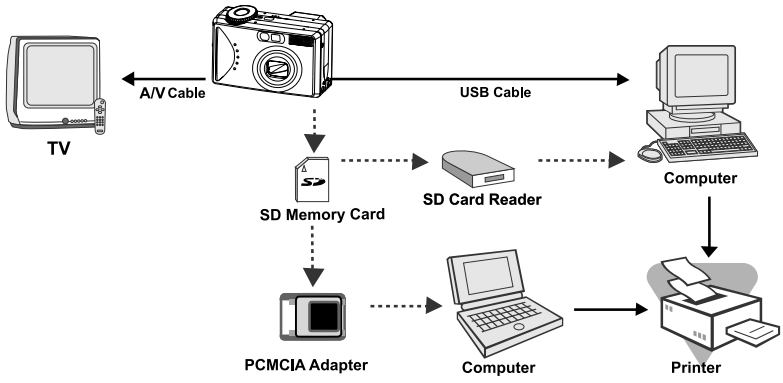
To install PhotoVista:

1. Insert the CD-ROM packaged with the camera into the CD- ROM drive. The welcome screen appears.
2. Click “Install PhotoVista”. Follow the on-screen instructions to complete the installation.

Note:

- For information on how to use PhotoVista to create panoramas with your recorded images, please refer to its online help.
- For Windows 2000/XP users, make sure to install and use the PhotoVista while logged in as a user with an Administrator account.
- PhotoVista is not supported on the Mac.
- Windows XP users who have not installed XP Service Pack 1, be sure to link to http:java.sun.com/getjava/download.html first and download the Java Virtual Machine installation. For more information about Java, please refer to its on-line help at http://java.sun.com/getjava/help.html After this Java installation, you can install iSee Media Photovista.
- Photovista System Requirements are:
  - Windows 98, Windows NT 4 (Service Pack 3 or higher)
  - Windows 2000, Windows Me, Windows XP Service Pack 1 or higher

CONNECTING THE CAMERA TO OTHER DEVICES



CAMERA SPECIFICATIONS

Item	Description
Image sensor	1/1.8" CCD 5.25 megapixel
LCD monitor	1.5" full color TFT
Optical viewfinder	Real image viewfinder
Image quality	Fine/Standard/Economy
Image resolution	<Still image> 2560x1920, 2048x1536, 1280x960, 640x480 <Movie image> 320x240, 160x120
Image storage	SD Memory Card (up to 512MB)
File formats	DCF, EXIF, AVI for movies
Lens	f =7.2mm to 21.6mm F/2.8~4.7
Range of Focus	See section " Focus Modes"
Focusing	Auto-focus
Shutter speed	8 to 1/1500 seconds
Image capturing	Single/Continuous/Auto exposure
Digital zoom	4x (Capture mode) 2x and 4x (Playback mode)
Exposure	Program/Tv/Av/Manual/Portrait/Sports/Night scene
Exposure compensation	-2EV to +2EV (0.5 steps)
White balance	Auto/Incandescent/Fluorescent 1/ Fluorescent 2/ Day light/Cloudy/Manual
Flash	Auto/Red-eye forced flash/ Suppressed flash/ Forced flash
Flash effective range	1.5 to 9 feet
ISO sensitivity	100 to 400 (Auto) 100/100-200/100-400 (Except Auto)
Self-timer	10 sec/2sec/10+2 sec/Interval
Video output	NTSC/PAL
Terminal	DC IN terminal/USB terminal/A/V OUT terminal
Power supply	Lithium Ion battery or AC adapter (5V)
Dimension (WxDxH)	94x63x35mm / 3.7x2.4x1.4inchs (without protruding components)
Weight	Approx. 6.3 ounces/180g (without battery)

*Design and specifications are subject to change without notice.